

Appl. No. : 10/009,792
Filed : December 13, 2001

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Amended) A recombinant plasmid vector which comprises:
a kanamycin resistance gene;
a promoter;
a nucleotide sequence coding for an endoxylanase signal sequence;
a nucleotide sequence coding for an oligopeptide consisting of 13 amino acids including 6 consecutive histidine residues; and,
a human granulocyte colony stimulating factor (hG-CSF) gene.
2. (Previously amended) The recombinant plasmid vector of claim 1, wherein the nucleotide sequence codes for an oligopeptide which comprises an amino acid sequence of isoleucine-glutamic acid-glycine-arginine (Ile-Glu-Gly-Arg; SEQ ID NO: 28) within the oligopeptide.
3. (Currently amended) A recombinant plasmid vector, pTHKCSFmII represented in Figure 13 which comprises:
a kanamycin resistance gene;
a Trc promoter;
a nucleotide sequence coding for an endoxylanase signal sequence derived from *Bacillus sp.*;
a nucleotide sequence coding for the oligopeptide of SEQ ID NO: 1, ~~which contains six consecutive histidine residues in the sequence AGPHHHHHHH and the protease target sequence IEGR; and~~
a modified gene coding for a human granulocyte colony stimulating factor (hG-CSF);
~~wherein the nucleotide sequences coding for the endoxylanase signal sequence, the oligopeptide of SEQ ID NO: 1 and N-terminal portion of the mature hG-CSF are present in SEQ ID NO: 26.~~
4. (Original) A microorganism, *E. coli* transformed with the plasmid vector, pTHKCSFmII of claim 3.

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5. (Original) The microorganism of claim 4, wherein the *E. coli* is selected from the group consisting of *E. coli* XL1-Blue, *E. coli* MC4100, *E. coli* BL21 (DE3), *E. coli* HB101 and *E. coli* W3110.

6. (Original) *E. coli* MC4100/pTHKCSFmII (KCTC 0754BP) transformed with the plasmid vector, pTHKCSFmII of claim 3.

7. (Original) A process for preparing a human granulocyte colony stimulating factor, which comprises the steps of:

culturing *E. coli* transformed with the plasmid vector of claim 1 to obtain a human granulocyte colony stimulating factor fusion protein; and,

treating the human granulocyte colony stimulating factor fusion protein with a protease to obtain a human granulocyte colony stimulating factor.

8. (Original) The process for preparing a human granulocyte colony stimulating factor of claim 7, wherein the plasmid vector of claim 1 is pTHKCSFmII.

9. (Original) The process for preparing a human granulocyte colony stimulating factor of claim 7, wherein the human granulocyte colony stimulating factor fusion protein is obtained from the culture by employing Ni-column.

10. (Original) The process for preparing a human granulocyte colony stimulating factor of claim 7, wherein the protease is Factor Xa.

11. (New) The recombinant plasmid vector of Claim 3, wherein said vector comprises the nucleotide sequence of SEQ ID NO: 26.

12. (New) The recombinant plasmid vector of Claim 3, wherein said modified gene comprises nucleotides 88 to 610 of SEQ ID NO: 18 and encodes the hG-CSF amino acid sequence of SEQ ID NO: 19.

13 (New) The recombinant plasmid vector of Claim 3, wherein said nucleotide sequence coding for said endoxylanase signal sequence comprises nucleotides 1-84 of SEQ ID NO: 26.